Electrochemical Investigation of Conducting Poly(ortho-anisidine) Langmuir-Schaefer Films Doped with Nafion

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Langmuir-Schaefer (LS) films of poly(ortho-anisidine) (POAS) have been fabricated at pH 1 of the subphase, where the doping during the monolayer formation is essential for high quality of the ultrathin films. POAS LS films have also been fabricated on a neutral aqueous subphase. The effect of doping on POAS LS films with Nafion has been verified by UV-visible and electrochemical techniques, respectively.
POAS/Nafion LS films were also characterised using UV-vis, FTIR spectroscopies, atomic force microscopy, Brewster angle microscopy, electrical and electrochemical techniques.
The effect of doping with Nafion were discussed at length. The cyclic voltammograms of POAS LS films, POAS/Nafion LS films and POAS/Nafion solution were also compared. The redox switching response time and diffusion coefficient of such LS films were estimated by electrochemical surveying.